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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/808,501 | 03/14/2001 | John Anthony Beaven | GB920000055US1 | 3614 |

7590 03/05/2007
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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
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2193

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 03/05/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 09/808,501 | | BEAVEN ET AL. | |
| | Examiner | | Art Unit | |
| | Insun Kang | | 2193 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the AP. Pre. Req. filed on 1/5/2007.
2. In view of the pre-appeal brief request filed on 1/5/2007, prosecution is hereby reopened. New grounds of rejection are introduced below. Claims 1-49 are pending.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Per claim 1, it is unclear how the first four specification elements (i.e. a component specification element...a resource specification element) are related to the quality of service specification derivation element. The claim also does not recite the relationships among the five specification elements, the application model, a quality of service specification, and components, control flows, data flows and resources. The claim is interpreted as: the quality of service specification is derived from the application model.

Per claims 2-17, it is unclear as to which "computer system" they are referring. Claim 1 does not recite "a computer system." It is interpreted as "the system."

Per claim 18, it is unclear as to which components, control flows, data flows and resources they are referring because only a single component, control flow, data flow, and resource are specified in line 2-3.

As per claims 19-33, these claims are rejected for dependency on the above rejected parent 18 claim.

Per claims 34-49, they are rejected for the same reasons set forth in connection with the rejection of claims 18-33 above.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1, 3-17, and 34-49 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1 and 3-17 are non-statutory because they are directed to a system that does not have physical structural elements and the system comprises only specification elements, runtime contracts etc that are disembodied arrangements so as to be called a "computer program" or compilation of facts, information, or data *per se*, without creating any functional interrelationship, either as part of the stored data or as part of the computing processes performed by the computer ("acts") or tangible computer readable medium (excluding a communication/transmission medium such as a signal, carrier wave etc) so as to enable the computer to perform the claimed specification/contract.

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With no other structure in the independent claims to rely on, the alleged "system" of the claims turns out to be non-statutory for being a computer program *per se*.

The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result. There is no physical transformation recited between the specification elements, application model and the quality of service specification from the claim language used in the claims and additionally, the final result of the claim is only intended action ("for output...by implication...made available to a runtime engine for deployment"), which is not a tangible result. Thus the claims represent non-functional descriptive material that is not capable of producing a useful result, and hence represent only abstract ideas. Therefore, the claims are non-statutory.

Claims 34-49 merely recite as a computer program that is disembodied arrangement so as to be called a "computer program" or compilation of facts, information, or data *per se*, without creating any functional interrelationship, either as part of the stored data or as part of the computing processes performed by the computer ("acts") or computer readable medium (excluding a communication/transmission medium such as a signal, carrier wave etc) so as to enable the computer to perform the claimed methods as recited. Since a computer program is merely a set of instructions only capable of being executed by a computer, the program itself is not a process, without the computer-readable medium needed to realize the

program's functionality. Thus the claims represent non-functional descriptive material that is not capable of producing a useful result, and hence represent only abstract ideas. Therefore, the claims are non-statutory.

The following link on the World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35 U.S.C. §101.

http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-14, 17-30, 33-46, and 49 are rejected under 35 U.S.C. 102(e) as being anticipated by Negri (US 2002/0059079).

Per claim 1:

Negri discloses:

-a component specification element (i.e. "Defines the principal components in a service. These include the software services and related physical elements that combine to deliver the service," 0048);

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- a control flow specification element (i.e. "The business process involves the flow of data and control through a complex arrangement of these components...eService management must understand this flow of data," 0046; 0049, "work together in complex flows of control," 0050)
- a data flow specification element (i.e. "The business process involves the flow of data and control through a complex arrangement of these components...eService management must understand this flow of data," 0046; 0049, 0050; 0060);
- a resource specification element (i.e. "share common resources," 0050, 0051, 0060, 0063);
- a quality of service specification derivation element (i.e. "deriving an e-service management strategy based on said business process specification...ensuring the service quality of said e-service," claim 1; 0036; 0050; 0057; 0063) having for output an application model in combination with a quality of service specification derived by implication from relations between components, control flows, data flows and resources(i.e. "(i.e. "An eService model...Defines the principal components in a service...Components are modeled by service delivery function...Process and responsibilities may be defined by function...Establishes implicit and explicit relationships...share common resources, exchange data with each other, collect common statistics, and work together in complex flows of control," 0047-0050; 0046);
- wherein said quality of service specification is made available to a runtime engine for deployment as a runtime contract in a runtime processing environment (i.e. "Service

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Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058) as claimed.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Negri discloses a runtime engine for deploying said runtime contract (i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

Per claim 3:

The rejection of claim 1 is incorporated, and further, Negri discloses a messaging requirement contract (i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

Per claim 4:

The rejection of claim 1 is incorporated, and further, Negri discloses a transactionality requirement contract (i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

Per claim 5:

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The rejection of claim 1 is incorporated, and further, Negri discloses a security requirement contract (i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

Per claim 6:

The rejection of claim 1 is incorporated, and further, Negri discloses a recoverability requirement contract (i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

Per claim 7:

The rejection of claim 1 is incorporated, and further, Negri discloses a completion requirement contract (i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

Per claim 8:

The rejection of claim 7 is incorporated, and further, Negri discloses a completion requirement contract specifying transactional behavior (i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

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Per claim 9:

The rejection of claim 7 is incorporated, and further, Negri discloses a completion requirement contract specifying compensation behavior (i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

Per claim 10:

The rejection of claim 1 is incorporated, and further, Negri discloses at least one of a reliability, availability and serviceability requirement contract (i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

Per claim 11:

The rejection of claim 1 is incorporated, and further, Negri discloses a quality of delivery requirement contract (i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

Per claim 12:

The rejection of claim 1 is incorporated, and further, Negri discloses

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at least one of a priority requirement and a response goal requirement contract(i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

Per claim 13:

The rejection of claim 1 is incorporated, and further, Negri discloses a performance requirement contract (i.e. "Service Level Agreements (SLA)," 0014; "a WebLogic BeX can be deployed at any site built upon BEA's WebLogic application server, 0058; claim 1; 0036; 0050; 0057; 0063) as claimed.

Per claim 14:

The rejection of claim 1 is incorporated, and further, Negri discloses the quality of service specification is stored in a repository (i.e. 0051).

Per claim 17:

The rejection of claim 1 is incorporated, and further, Negri discloses a quality of service specification is stored in a modeling language (i.e. "eService modeling," 0044) as claimed.

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Per claims 18-30 and 33, they are the method versions of claims 1, 2, 4-14 and 17, respectively, and are rejected for the same reasons set forth in connection with the rejection of claims 1, 2, 4-14 and 17 above.

Per claims 34-46 and 49, they are the computer program versions of claims 18-30 and 33, respectively and are rejected for the same reasons set forth in connection with the rejection of claims 18-30 and 33 above.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 15, 16, 31, 32, 47, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Negri (US 2002/0059079) as applied to claims 1-14, 17-30, 33-46 and 49 above in view of Koistinen et al. ("Quality of Service Aware Distributed Object Systems," 5/1999) hereinafter referred to as "Koistinen."

Per claim 16:

The rejection of claim 1 is incorporated, and further, Negri does not explicitly teach that the quality of service specification is stored in XML. However, Koistinen teaches that storing a quality of service specification in a tagged markup language such as XML was

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known in the pertinent art, at the time applicant's invention was made, "so that it can be understood readily by humans and parsed easily (pg 9, Implementation section)" such as that disclosed in Koistinen. It would have been obvious for one skilled in the art of the pertinent art to modify Negri's disclosed system to use XML. The modification would be obvious because one skilled in the art would be motivated to provide readability and ease parsing as taught by Koistinen (pg 9, Implementation section).

Per claim 32, it is the method version of claim 16, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 16 above.

Per claim 48, it is the computer program version of claim 16, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 16 above.

Per claim 15, this claim is broader version of the claimed system discussed in claim 16 wherein all claim limitations also have been addressed and/or covered in cited areas as set forth the above. XML in claim 16 is a tagged markup language. Therefore, accordingly, see the rejection of claim 16 above.

Per claim 31, it is the method version of claim 15, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 15 above.

Per claim 47, it is the computer program version of claim 15, respectively, and is rejected for the same reasons set forth in connection with the rejection of claim 15 above.

Response to Arguments

10. Applicant's arguments with respect to claims 1 and 18 have been considered but are moot in view of the new ground(s) of rejection. Therefore, this action is non-final.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The examiner can normally be reached on M-R 6:30-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MENG AI AN can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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